

Smartphone Addiction in Relation to Alienation and Depression Among Adolescents

¹Ms. Nupur Dogra, ²Dr. Shaveta Sharma,

¹Research Scholar, Department of Education, Sant Baba Bhag Singh University, Jalandhar, Punjab, India

²Associate Professor, Department of Education, Sant Baba Bhag Singh University, Jalandhar, Punjab, India

Abstract

The present study is an attempt to study smartphone addiction and its relationship with alienation and depression among adolescents. Survey method conducted on 200 adolescents studying in government and self-financed schools of Jammu and Kathua. Data collection instruments were Smart phone addiction scale by Vijayshri and Masaud Ansari (2021), Facebook Usage Scale by Madhuri Hooda and Ankur Tyagi (2017), Mental Depression scale by Veenita Sharma (2019) and Alienation Scale by Jasbir Kaur and Gurmit Singh (2016). Pearson's coefficient of correlation was used to find out the relationship between variables. Regression was used to find out the conjoint effect between the variables. The results of the study indicate that smart phone addiction is positively and significantly correlated with alienation and depression among adolescents. The findings of the study further indicate that alienation and depression would contribute towards the prediction of smartphone addiction of adolescents both independently as well as conjointly.

Keywords: Smartphone addiction, depression, alienation, adolescents

Introduction

Smartphone usage rates have increased rapidly around the world (Kuss et al., 2018; Noe et al., 2019; Recio-Rodriguez et al., 2019, Zhao and Lapierre 2020). Previous studies have shown that smartphones are used for both entertainment and educational purposes, such as media, internet access, online shopping, music, photos and games (Oh, Kim and Park 2018) and the reason for popularity of smartphones is due to the applications and features designed to catch the user's attention (Schuz 2005) but if individuals use smartphones excessively and uncontrollably for a long time, they may develop smartphone addiction (Cebi et al., 2019; Huang et al., 2022). With the attractive features provided by the smartphone technology, people can form interpersonal relationships and maintain those relationships using social networking sites (Deursen et al., 2015). In addition, smartphones can increase the efficiency of the work process, enhanced productivity in the workplace (Wu 2013) and decrease the stress of daily life (Park and Kang 2019). Therefore, it is not a surprising fact that smartphones have become an important part of the life of human beings in terms of internet, social

media and communication purposes (Yilmaz, Avci and Yilmaz 2022).

According to a recent survey, the smartphone ownership rate worldwide exceeded three billion in 2019 (Statista 2020). However, when we look at the studies that examine the effects of smartphone usage it may be concluded that smartphone addiction not only confers psychological and physiological effects on adolescents (e.g., anxiety, depression, and stress) but also negatively affects academic performance, coping styles, interpersonal relationships, etc., (Clayton et al., 2015; Samaha and Hawi, 2016; Lu et al., 2021; Diotaiuti et al., 2022; Wang et al., 2022; Yang et al., 2022; Zhang et al., 2022). Although smartphone is useful, the overuse of this system may cause individuals to become overly attached to their smartphones (Durak 2019; Aljomaa et al 2016) and may lead them to experience smartphone addiction (Cha and Seo 2018; Lin et al 2015).

Smartphone addiction is the most serious and complex problem that users are explicitly and implicitly bounded with. This phenomenon of smartphone addiction can be observed throughout the world. A survey by Ammati et al., (2018) reported that 39% to 44% of users in India are

addictive to smartphone. However, many people don't realize that smartphone addiction is a serious problem leading to a negative impact on the person's behaviour and mental health such as changes in attitude towards school or work, lack of peer relationships and reduction of social interaction in real life (Kuss et al., 2014). Some experts believe that dependence of smartphone or smartphone addiction is the "21st century addiction". Kim (2013) stated that smartphone addiction refers to the situation in which the increase in usage cannot be controlled because of the excessive engagement in the smartphone. According to Hong, Yeom and Lim (2021) smartphone addiction is defined as a state involving the overuse of a smartphone, with withdrawal symptoms of feeling worried and nervous in the absence of smartphone. Based on the previous studies, overuse of smartphone or smartphone addiction has been categorized as behavioural addiction due to its central components such as lack of control, mood change, pre-occupation and silence (Mohamed and Mostafa 2020).

From the environmental aspect, one of the major risks leading to smartphone addiction is social alienation. Young (2017) also stated that social problems, especially lack of interpersonal attraction such as Low communication skills, loneliness or alienation can directly lead to smartphone addiction. According to Mann (2011) alienation is a state or condition of an individual who has cut himself off from a social group or activity in which he should participate. Studies have proved that Alienation leads to premature school withdrawal (Lauterbach 1967), low academic achievement (Mau 1992), poor job performance (Nair and Vohra 2012) depression (Goldsmith, Veum and William 1996) and low self-esteem (Akhtar and Shaukat 2016). Broadly, alienation is an unpleasant situation when a person experiences a decrease in social relations both in quantity such as lack of social relationship or qualitative such as an abusive relationship. Previous study conducted by Xu (2017) showed that there is a positive relationship between loneliness and smartphone addiction in high school students of China, the higher the loneliness, the higher the smartphone addiction experience by high school students of

Beijing, China. In 2022, a study conducted by Mathurwala among college students in Pune (India) found that there exists a positive relationship between loneliness and depression. Similarly, to know the connection between loneliness and smartphone addiction in college students of Turkey, a correlational study was conducted by Darcin et al., (2017) among 317 students using purposive sampling. The variables of this study were measured using UCLA Loneliness Scale and Smartphone Addiction Scale. The results show that there exists a positive correlation between loneliness and smartphone addiction. A similar correlational study conducted by Hidayati and Hidayati (2019) on Indonesian university students included 356 university students and studied the relationship between Smartphone addiction and loneliness, reporting a significant relationship to exist among smartphone addiction and loneliness. The review study carried out by Atarodi, Rajabi and Atarodi (2020) reported also that there is a relationship between cell phone dependence and social alienation. Another study conducted by Hu, Liu and Wang (2022) on a sample of 579 university students from China, using Adolescent's Alienation Scale and Smartphone Addition Scale, reported that interpersonal alienation and meaning in life significantly increased and the risk of smartphone addiction significantly decreased in the end period of COVID-19 epidemic.

With regard to psychological aspects, depression is a general reflection of individual's wellbeing that is thought to be highly correlated with Smartphone addiction. Supported by research conducted by Yu (2009) reported that excessive use of smartphones causes anxiety and depression. According to World Health Organization (2017) "Depression is a common psychological disorder that presents with low self-worth, lack of motivation or interest, feeling of sadness or disappointment, wakefulness or insomnia, lack of energy and inattentiveness. These symptoms can become chronic and lead to irreparable damage to an individual's ability to take charge of his/her everyday duties and responsibilities". It is mostly noticed People who are addicted to their smartphones do not get enough sleep and they do not take their food at the appropriate time and do not go for exercise to

maintain a healthy body weight and these factors are directly related to anxiety and depression (Khan, Asif and Abbas 2022). An increasing number of studies have suggested strong links between smartphone addiction and depression, especially in adolescent and young populations. Zhao and Lapierre (2022) study of 222 students revealed that stress is associated with both person to person and social networking smartphone use. It has also been found that perceived stress fully mediated the link between problematic smartphone use and depression. Another study in China, conducted by Ge et al., (2023) among 421 college students reported that anxiety, depression and executive dysfunction are positively and significantly associated with smartphone addiction. It has also been found that dysfunction mediated the link between depression and smartphone addiction. Prekshaa, Ratan and Pradeep (2019) conducted a study among 146 medical students to examine the association between smartphone addiction and depression. The study findings demonstrated that there exists a significant association between smartphone addiction and personality dimensions such as assertive- submissive, depressive and non-depressive and emotional stability and instability. Another study conducted by Choksi and Patel (2021) on a sample of 100 students showed a moderate correlation between smartphone use and sleep quality as well as between smartphone use and depression. Likewise, Chatterjee et al., (2022) conducted a study among 302 smartphone users to examine the dark side of smartphone applications. The study findings demonstrate that loneliness, stress and depression are the principal factors impacting smartphone addiction.

The review of studies related to smartphone addiction, depression and alienation show that these variables have been studied mostly in western countries while a very few studies have been carried out in Indian setup. It is important to examine smartphone addiction as it is a common phenomenon that we easily encounter in our daily lives. Hence, this gap of knowledge encourages the investigators to examine smartphone addiction among adolescents in relation to depression and alienation.

The present study has the following objectives:

- To investigate the significance of the relationship between smartphone addiction and alienation among adolescents.
- To explore the relationship between smartphone addiction and depression among adolescents
- To investigate the conjoint effect of alienation and depression on smartphone addiction among adolescents

Sample and Sampling Technique

The present study was a descriptive study. Survey method was conducted on 200 adolescents studying in government and self-financed schools of Jammu and Kathua. Pearson's coefficient of correlation was used to find out the relationship between variables. Regression was used to find out the conjoint effect between the variables. Data collection instruments were Smart phone addiction scale by Vijayshri and Masaud Ansari (2021), Facebook Usage Scale by Madhuri Hooda and Ankur Tyagi (2017), Mental Depression scale by Veenita Sharma (2019) and Alienation Scale by Jasbir Kaur and Gurmit Singh (2016).

For this study, the following hypotheses were proposed:

Hypothesis 1. There exists a significant relationship between smartphone addiction and alienation among adolescents.

Hypothesis 2. There exists a significant relationship between smartphone addiction and depression among adolescents.

Hypothesis 3. Alienation and depression would contribute towards the prediction of smartphone addiction of adolescents both independently as well as conjointly.

Results And Discussion

In order to verify aforesaid hypothesis i.e. 'There exists a significant relationship between smartphone addiction and alienation among adolescents', coefficient of correlation was calculated with product moment method between the scores of adolescents on the variable of smartphone addiction and alienation. The coefficient of correlation was found to be 0.43

which was significant at 0.01 levels, indicating that there is positive and significant relationship between the variables. It can be concluded from the results that smartphone addicted adolescents are found to be more alienated. Hence the above stated hypothesis, 'There exists a significant relationship between smartphone addiction and alienation among adolescents' has been accepted. The findings of Dikeç et al., (2017) ; Kandari and Sejari (2021) ; Ozok, Mukba and Tayiz (2022); Hu, Liu and Wang (2022) and Xu, Zeng, Dong, Zheng and Si (2023) are in line with the present results, as they have researched that smartphone addiction has been positively linked to alienation.

To test Hypothesis 2 i.e. 'There exists a significant relationship between smartphone addiction and depression among adolescents', Pearson product moment method was employed. The values of coefficient of correlation between the variables was found to be 0.57 which was positive and significant at 0.05 level and 0.01 level of significance, meaning thereby that, the adolescents who are more smartphone addicted are more depressed. Therefore, Hypothesis 2 'There exists a significant relationship between smartphone addiction and depression among adolescents' stands accepted.

The result has been found to be supported by the findings of Alhassan, Alqadhib, Taha, Alahmari, Salam and Almutairi (2018); Mohammed and Mostafa (2020); Lee, Lim, Allen, Choi and Jung (2021); Islam (2021) and Tu et al., (2023) who found significant and positive relationship between smartphone addiction and depression among adolescents.

Regression for predictive efficiency

'The conjoint effect of alienation and depression on Smartphone addiction among adolescents is higher than their individual effects'

Y - Smartphone addiction, X_1 - alienation, X_2 - depression

The effect of alienation on Smartphone addiction among adolescents was found significant at .01 level ($F(1, 198) = 44.80$). The computed value of R^2 of alienation and Smartphone addiction among adolescents (YX_1) is 0.185 which indicates that the

contribution of alienation on Smartphone addiction among adolescents is 18.5%. The Smartphone addiction among adolescents can be predicted with the equation = Smartphone addiction = $25.73 + 0.28 \times$ Alienation i.e. for every unit of increase in alienation, Smartphone addiction among adolescents increase .28. The effect of depression on Smartphone addiction among adolescents was found significant ($F(1, 198) = 96.71$). The computed value of R^2 of depression and Smartphone addiction among adolescents (YX_2) is 0.328 which indicates that the contribution of depression on Smartphone addiction among adolescents is 32.8% which is not significant. The Smartphone addiction among adolescents can be predicted with the equation, smartphone addiction = $41.26 + 0.98 \times$ depression, i.e. for every unit of increase in depression, Smartphone addiction among adolescents increase .98. The conjoint effect of both alienation and depression on Smartphone addiction among adolescents was found significant at 0.01 level of significance ($F(2, 197) = 60.95$). The computed value of R^2 of Smartphone addiction with alienation and depression ($Y_1X_1X_2$) is 0.382 which indicates the contribution of alienation and depression on Smartphone addiction among adolescents is 30.9%.

As %age variance (=38.2) of variables of alienation and depression conjointly on Smartphone addiction among adolescents shows increase in its value from alienation (%age variance =18.5) and depression (%age variance =32.8), it indicates that the conjoint effect of alienation and depression on Smartphone addiction among adolescents is higher than that of alienation and depression separately. However depression is not the significant predictor of Smartphone addiction among adolescents. The smartphone addiction among adolescents can be predicted with the equation, smartphone addiction = $23.56 + 0.17 \times$ alienation + $0.82 \times$ depression. Hence, Hypothesis 3 stating, "Alienation and depression would contribute towards the prediction of Smartphone addiction of adolescents both independently as well as conjointly" stands partially accepted.

Conclusions and Educational Implications of the study:

The present study found that smart phone addiction is positively and significantly correlated with alienation and depression among adolescents. It was further found that alienation and depression would contribute towards the prediction of smartphone addiction of adolescents both independently as well as conjointly. There are several important practical implications for parents, educators and policy makers to cultivate a positive and healthy mind-set of smartphone usage in adolescents. Parents should spend more time with their children to develop multiple interests and keep their children constantly occupied in various activities. In this connection, by knowing what their children really desire, parents can effectively reduce their children's depression and loneliness. Further, Parents should monitor their children and limit them from excessive use of smartphone (Cheng, Yang and Lee 2021).

On the other hand, teachers should organize small group work and encourage students to interact with their team mates for avoiding a deficiency of inter personal alienation which could trick students into feeling alienated (Tran, Jia and Li 2017; Dari et al., 2021). Teacher should have a proper understanding of student's relationships with their parents who help them to learn more about student's needs and home environment. During the class, teachers should guide their students to learn new skills which encourage students to overcome their addiction for smartphones. Teachers should provide extensive knowledge to the students on the advantages and disadvantages of smartphones at an early age. It prevents the negative effects of smartphone addiction in adulthood and leads to purposive use of smartphones in the future.

Polycymakers should initiate such programs, seminars, events or a talk that gives awareness about the negative effects of smartphone addiction. In addition, policy makers should introduce safety standards that make smartphone safer for children of all ages. Furthermore, policy makers should install certain applications to count daily phone usage and limit internet access during classroom lectures.

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